

L 28514-66

ACC NR: AR6000074

that required for the breakdown of thin dielectric films. This indicates the importance of impact ionization and the development of electron avalanches. The oscillograms registered repeated short-period breakdown of selenium rectifiers, after which the properties of the rectifiers were restored. Refs.: 17. (Translation of abstract) (S.A.)

SUB CODE: 09/ SUBM DATE: none

Card 2/2 CC

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|---|--|
| <p>110KH0V3K1Y, M.K.</p> <p>M</p> <p>Effect of the Mechanical Properties of the Metal, of its Composition, and of the Coefficient of Strength on the Elastic Properties of Bourdon Tubes. M. K. Zhoborskiy (Turk. Indust. (Precision Ind.), 1937, (10), 13-16; (12), 12-15).-- [In Russian.] For tubes made from "1.03" brass, relations were established between the limit of proportionality, tensile strength, and elongation, and between the tensile strength on the one hand, and movement of the tube's end, pressure applied, and strength coeff. (i.e. the ratio of the limit of proportionality to the pressure limit of the pipe) on the other. A tensile strength of 80-85 kg./mm.<sup>2</sup> and an elongation of 6-10% are recommended. The alloys: (1) copper 82, zinc 18%, (2) copper 80, nickel 20%, (3) copper 83, zinc 2, tin 4%, and (4) copper 88-9, beryllium 1-2%, may be used if the size of the tube is correctly chosen. The strength coeff. must not be less than 2. The ratio of the axes of elliptical pipes may be between 3.7 and 6.--N. A.</p> |  |
| <p>ASAC-USA METALLURGICAL LITERATURE CLASSIFICATION</p>   |  |
| <p>SEARCHED</p> <p>INDEXED</p> <p>SERIALIZED</p> <p>FILED</p>   | <p>APR 1938</p> <p>U.S. DEPT. OF COMMERCE</p> <p>LIBRARY OF CONGRESS</p> |

| ZHOVNOVSKIY, M. K.   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PROCESSING AND PROPERTIES INDEX                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
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| <p>531,787<br/>           Theory of the photo microscope. A. M.<br/>           PAVLOVICH; Reply to above. M. K. ZHOVNOVSKIY.<br/>           J. Tech. Phys., USSR, 28, 368-9 (March, 1950) in<br/>           Russian.</p> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ASR-11A METALLURGICAL LITERATURE CLASSIFICATION  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | REVIEW, 1950  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>FROM: 57-0114</p> <p>SEARCHED INDEXED</p> <p>FILED</p>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | <p>FROM: 57-0114</p> <p>SEARCHED INDEXED</p> <p>FILED</p> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

PHASE I Treasure Island Bibliographic Report

00000031

Call No.: AF-480616, Incl. 7

BOOK

Author: ZHOKHOVSKII, M.K.

Full Title: TECHNIQUES OF MEASURING PRESSURE AND RARIFICATION

Transliterated Title: (Tekhnika izmereniia davleniia i razriazheniia

Publishing Data

Originating Agency: Committee dealing with measures and measuring instruments at the Council of Ministers of the USSR.

Publishing House: State Publishing House of Scientific-Technical Literature on Machine Building.

Date: 1952.

No. pp.: 270

No. copies: 6,000

Editorial Staff

Editor: Lisachenko, I.P.

Editor-in-Chief: None.

Technical Editor: None.

Appraiser: Dolinski, E.T.,  
B. Eng. Sc.

Text Data

Coverage: The book describes the theories of various apparatuses and devices for measuring pressure and rarification; also, describes the construction characteristics of major components, methods of calibration, testing, and operation. Data on the following types of apparatuses given: apparatus with liquids, piston monometers, spring apparatus, and combined electrical monometers.

Purpose: A book for operation and testing engineers; and, a textbook for students studying the science of measurement.

1/2

Card 2/2

00000031

Full Title: TECHNIQUES OF MEASURING PRESSURE AND RARIFICATION

Call No.: AF-480616, Incl. 7

Facilities: None.

No. Russian References: 30.

Available: A.I.D., Library of Congress.

ZHOKHOVSKIY, M.K.

~~XXXXXXXXXXXXXXXXXXXX~~

Mercury fusion curves at pressures up to 10,000 kg/cm<sup>2</sup>.

Ism.rekh.no.5:3-6 S-O '55.

(MLRA 9:1)

(Pressure (Physics)) (Mercury)

05456  
SOV/120-59-3-27/46

AUTHORS: Zhokhovskiy, M. K., Konyaev, Yu. S., and Levchenko, V.G

TITLE: A Piston Pressure Gauge for use up to 20,000  
Atmospheres (Porshnevoy manometr do 20 000 am)

PERIODICAL: Priory i tekhnika eksperimenta, 1959, Nr 3,  
pp 118-122 (USSR)

ABSTRACT: A pressure amplifier is used in the gauge, which is seen  
in Fig 1. The piston 1 fits closely in the cylinder 2,  
which is held in the double jacket 3. Cylinder 2 is  
held by screwed ring 4, which compresses the seal 5,  
which has an unbalanced area. The piston is coupled  
to the low-pressure piston via a ball joint; this  
latter piston lies in cylinder 7, which is joined firmly to  
body 3 to make the pistons strictly coaxial. The  
pulley 8 sets the pistons turning to overcome friction.  
The head 10 contains a valve 11 and viewing ports,  
and holes for connecting a piston gauge 12 with load 13.  
A hole in 10 joins 12 to 11; this communication can be  
cut off. The indicator 14 is used to measure the  
position of the piston. (The gain of the multiplier  
Card 1/3 is about x 280). Fig 2 shows a system used to produce



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A Piston Pressure Gauge for use up to 20,000 Atmospheres

20,000 atm and to measure it exactly. The gauge 1 is coupled through a junction block 2 to a pressure amplifier 3, which is fed at low pressure by the unit 4, which includes a pump, a vessel holding liquid, a gauge, valves, and connecting tubes. The booster unit 5 produces the initial high pressure by means of another working fluid; this unit is shut off by means of the hydraulically operated valve 6. The screw press 7 adjusts the height of the piston and operates valve 6. Gauge 8 and valve 9 are used to measure the pressure produced by 7. The block 2 contains a calibrated manganin pressure gauge 10 on the high-pressure side. Glycerol containing 40% glycol is used as the main working fluid; it has an initial viscosity of 1.65 poise, does not crystallize, and has only a small pressure coefficient of viscosity. Fig 3 shows how the speed of the piston varies with pressure when the piston is properly lapped into the cylinder. The constants of the apparatus are given at the top right corner of p 121. The last part deals with some tests made to ensure that plastic deformation is absent at the highest pressure. There are

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A Piston Pressure Gauge for use up to 20,000 Atmospheres

3 figures and 11 references, 7 of which are Russian,  
2 English and 2 German.

ASSOCIATION: Laboratoriya fiziki sverkhvysokikh davleniy  
AN SSSR (Laboratory of High-Pressure Physics, Academy  
of Sciences of the USSR)

SUBMITTED: April 15, 1958

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24 (8)

06181  
SOV/115-59-11-9/36

AUTHORS: Zhokhovskiy, M.K., Razumikhin, V.N., Zolotikh, Ye.V.,  
Burova, L.L.

TITLE: A Thermodynamic Scale of High Pressures up to 25,000  
kg/cm<sup>2</sup>

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 11, pp 26-29

ABSTRACT: This article is based on a previous publication of the  
aforementioned authors [Ref 1]. At that time the au-  
thors investigated the curve of melting mercury up to  
20,000 kg/cm<sup>2</sup>. They applied it for solving the problem  
of a high pressure scale. They confirmed experimental-  
ly that the extrapolation of the equation of the curve  
of melting mercury (on which the thermodynamic scale of  
pressure is base) is permissible up to 20,000 kg/cm<sup>2</sup>  
with an accuracy of 0.4-0.8%. In this article, the au-  
thors present the results of new investigations in a  
pressure range extended to 25,000 kg/cm<sup>2</sup>. The equip-  
ment for the experimental determination of the phase  
equilibrium of mercury and the methods of determining

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06181

SOV/115-59-11-9/36

A Thermodynamic Scale of High Pressures up to 25,000 kg/cm<sup>2</sup>

the equilibrium pressures and temperatures in the new pressure range up to 25,000 kg/cm<sup>2</sup>, remained the same as in Ref 1. The thermodynamic scale of pressures was extended to 25,000 kg/cm<sup>2</sup> with an accuracy of  $\pm 0.5\%$ . A group of reference resistance pressure gages was developed which reproduce the thermodynamic scale of pressures within the aforementioned limits and with the aforementioned accuracy. A device was developed which may be used for transferring the values of the pressure scale to any device of high pressure engineering. This device consists of manually and mechanically operated hydraulic pumps, pressure multipliers to 6000 and 25,000 kg/cm<sup>2</sup> and the necessary valve system as shown in Fig 2. In the interval between 5000 and 25,000 kg/cm<sup>2</sup>, any intermediate value may be produced. There are 1 diagram, 1 graph, 1 table, and 3 Soviet references.

Card 2/2

ZHOKHOVSKIY, M.K.

Theory of manometers with a piston without packing. Trudy inst.  
Kon. stand., ser 1 izm. prib. no. 46:5-29 '60, (MIRA 13:12)  
(Manometer)

S/124/61/000/009/021/058  
D234/D303

AUTHOR: Zhokhovskiy, M.K.

TITLE: Corrections of piston manometers caused by the influence of high pressures

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 9, 1961, 98, abstract 9 B729 (Tr. in-tov kom-ty standartov, mer. i izmerit. priborov pri Sov. Min. SSSR, 1960, no. 46(106), 30-42)

TEXT: In the process of measuring high pressures (of the order of 10000 - 20000 kg/cm<sup>2</sup>) by piston manometers it is necessary to make corrections owing to the deformation of the piston system of the manometer. The paper gives mathematical analysis and the deduction of a formula for calculating the magnitude of such corrections for manometers with a packless piston in a cylinder with back pressure and without back pressure, also for manometers with single and double differential piston. It is established that the correc-

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Corrections of piston manometers...

S/124/61/000/009/021/058  
D234/D303

tion for piston manometers in its general form is a quadratic function of the pressure which is measured. Results of several investigations on the influence of pressure on the effective area of the piston of the manometer are exposed. [Abstracter's note: Complete translation]

Card 2/2

9/123/61/000/014/035/045  
A004/A101

AUTHOR: Zhokhovskiy, M.K.

TITLE: Thermodynamic method of reproduction of superhigh pressures

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no. 14, 1961, 8, abstract 14E57 ("Tr. in-tov Kom-ta standartov, mer izmerit. priborov pri Sov. Min. SSSR", 1960, no. 46 (106), 68 - 80)

TEXT: The author substantiates the possibility of producing a thermodynamic pressure scale based on the equilibrium state of the liquid and solid phase of substances at a definite temperature and corresponding pressure. The author presents formulae describing the dependence of the critical temperature on the pressure for mercury, as well as experimental data confirming the correctness of the constants of this equation, and also the curves of the dependence of the specific melting energy on the temperature of various substances at pressures of up to 12,000 kgf/cm<sup>2</sup>, and of the dependence of the specific melting energy on the pressure. A new form of the Simon equation is suggested and an interpretation of the physical significance of its constants is given. Tables of the

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Thermodynamic method ...

S/123/61/000/014/035/045  
A004/A101

values of  $\alpha$ -constant are given (ratio of the specific energy increment to the pressure increment) for various substances at pressures up to 12,000 kgf/cm<sup>2</sup> through every 1,000 kgf/cm<sup>2</sup>. The conservation of the permanence of the  $\alpha$ -constant at pressures of the order of 50,000 kgf/cm<sup>2</sup> has been confirmed by experiments. The extrapolation of the equation to realize the thermodynamic scale in the range exceeding 20,000 kgf/cm<sup>2</sup> is based on the physical interpretation of the constant and its analytic expression in terms of the melting parameter.

K. Perchikhin

[Abstracter's note: Complete translation]

Card 2/2

ZHOKHOVSKIY, M.K.; BAKHVALOVA, V.V.

Errors due to deformations of piston manometers at pressures up to  
10,000 kg-wt/cm<sup>2</sup>. Izv.tekh. no.12:23-26 D '61. (MIRA 15:1)  
(Manometer)

ZHONHOVSKIY, M.K.

Some results of research in the field of high-pressure  
measurements. Izv. Akad. Nauk SSSR, Mekh. i Fiz. (1964), 17:7

ZHOKHOVSKIY, M.K.; BOGDANOV, V.S.

Experimental determination of volume jump on the melting of benzene and nitrobenzene under pressure up to 10,000 kg/cm<sup>2</sup>. Zhur.fiz.khim. 39 no.10:2520-2525 O '65. (MIRA 18:12)

1. Vsesoyuznyy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Submitted August 4, 1964.

ZHOKHOVSKIY, M.K.

Thermodynamics of the melting process under pressure. Trudy inst.  
Kom.stand,mer i izm.prib. no.75:69-92 '64.

(MIRA 2381)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy.

BAKHVALOVA, V.V.; ZHOKHOVSKIY, M.K.

Experiment's investigation of deformation errors of piston manometers at pressures up to  $10,000 \text{ kgf/cm}^2$ . Trudy Inst. Kom. stand. mer i izm. prib. no. 75:9-27 '64.

Manometer with an effective piston area inalterable by pressure.  
Ibid. 328-35 (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy.

BAKHVALOVA, V.V.; ZHOKHOVSKIY, M.K.

High pressure differential resistance manometer. Trudy inst. Kos.  
stand. mer i izm. prib. no. 75:55-59 '64.

(MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy.



ZHOKHOVSKIY, M.K.; BAKHVALOVA, V.V.

Investigating a manometer with a pressure resistant effective piston surface. Izv. tekhn. no. 3:24-27 Mr '64  
(MIRA 17:8)

ZHOKHOVSKIY, M.K. (Moscow)

Thermodynamics of melting under pressure. Zhur. fiz. khim. 38  
no.1:33-40 Ja'64. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy.

ZHOKHOVSKIY, M.K.

Volume change during melting under pressure. Zhur. fiz. khim.  
37 no.12:2635-2639 D '63. (MIRA 17:1)

ACCESSION NR: AP4011437

S/0076/64/038/001/0033/0040

AUTHOR: Zhokhovskiy, M.K. (Moscow)

TITLE: Thermodynamics of melting under pressure

SOURCE: Zhurnal fiz. khim, v. 38, no. 1, 1964, 33-40

TOPIC TAGS: thermodynamics, internal energy change, enthalpy, entropy, free energy, compressibility, thermal expansion, heat capacity, thermodynamic expressions, melting, melting curve

ABSTRACT: Expressions were obtained for the change in the thermodynamic parameters along the melting curve. In these expressions  $p$  = pressure;  $T$  = temperature;  $\lambda$  = latent heat of fusion;  $dv$  = change in volume;  $p_0$ ,  $T_0$ ,  $\lambda_0$  and  $dv_0$  corresponding values at the triple point;  $a$  and  $b$  = empirical constants. For change in internal energy:

$$\Delta U = \lambda_0 \left[ \left( \frac{T}{T_0} \right)^a \left( 1 - \frac{1}{c} \right) + \frac{1}{c} \right] e^{-b(T/T_0 - 1)}$$

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ACCESSION NR: AP4011437

$$\Delta U = \left[ \frac{\lambda_0}{\Delta v_0} + (c-1)p \right] \Delta v_0 e^{-b \left[ \left( \frac{cp + \lambda_0/\Delta v_0}{\lambda_0/\Delta v_0} \right)^{1/c} - 1 \right]}$$

for enthalpy:

$$\Delta H = \left( \frac{\lambda_0}{\Delta v_0} + cp \right) \Delta v_0 e^{-b \left[ \left( \frac{\lambda_0/\Delta v_0 + cp}{\lambda_0/\Delta v_0} \right)^{1/c} - 1 \right]}$$

for entropy:

$$\Delta S = \left( \frac{\lambda_0}{\Delta v_0} \right)^{1/c} \left( \frac{\lambda_0}{\Delta v_0} + cp \right)^{1-1/c} \frac{\Delta v_0}{T_0} e^{-b \left[ \left( \frac{\lambda_0/\Delta v_0 + cp}{\lambda_0/\Delta v_0} \right)^{1/c} - 1 \right]}$$

for free energy:

$$\Delta F = -p \Delta v_0 e^{-b \left[ \left( \frac{\lambda_0/\Delta v_0 + cp}{\lambda_0/\Delta v_0} \right)^{1/c} - 1 \right]}$$

The thermodynamic functions have extremes. Experimental data for sodium and aniline are in good agreement with theory. Expressions were obtained relating the differences in compressibilities,

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ACCESSION NR: AP4011437

thermal expansions ( $\Delta\alpha, \Delta\beta$ ) or the liquid and solid phases with the differences in heat capacities:

$$\Delta C_p = \Delta\chi \left[ \frac{c-1}{T} - \frac{b}{T_0} + \frac{\Delta\beta}{\Delta v} \right].$$

$$\Delta C_p = \lambda_0 \left( \frac{T}{T_0} \right)^c e^{-b(T/T_0-1)} \left[ \frac{c-1}{T} - \frac{b}{T_0} + \frac{\Delta\beta}{\Delta v_0} e^{b(T/T_0-1)} \right].$$

$$\Delta C_p = \frac{\lambda_0}{\Delta v_0} \left( \frac{T}{T_0} \right)^c \frac{1}{T} \left[ \left( c-1-2b \frac{T}{T_0} \right) \Delta v_0 e^{-b(T/T_0-1)} - \Delta\alpha \frac{\lambda_0}{\Delta v_0} (T/T_0)^c \right].$$

A differential equation for the melting curve expressed through these differences was derived:

$$\frac{dp}{dT} = -\frac{1}{\Delta\alpha} \left[ \frac{b}{T_0} \Delta v_0 e^{-b(T/T_0-1)} + \Delta\beta \right].$$

Orig. art. has: 37 equations and 5 figures.

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ACCESSION NR: AP4011437

ASSOCIATION: Vsesoyuzniy\* y nauchno-issledovatel'skiy institut  
riziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (All Union  
Scientific Research Institute of Physico-technological and Radio-  
technological Measurements)

SUBMITTED: 13Jul62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 004

OTHER: 000

Card 4/4



ZHOKHOVSKIY, Vsevolod Vatslavovich; MARASULOV, Sharif Rasulovich;  
~~VARSHAVSKAYA, L.V., red.~~; BISHYREVA, G.G., tekhn. red.

[Assembly and installation of machinery in cotton-spinning  
factories] Montazh mashin khlopkopriadil'nogo proizvodstva.  
Moskva, Gizlegprom, 1963. 239 p. (MIRA 16:9)  
(Cotton machinery)

ZHOKHOVSKIY, V.V., kand.tekhn.nauk

Altered design of the LY-2-32 draw frame. Tekst.prom. 21  
no.2:61-63 Ja '61. (MIRA 14:3)  
(Spinning machinery)

BUDNIKOV, V.I.; ZHOKHOVSKIY, V.V.

New method of cotton spinning. Izv.vyz.ucheb.sav.;tekh.tekst.prom.  
no.5:55-60 '60. (MIRA 13:11)

1. Tashkentskiy tekstil'nyy institut.  
(Cotton spinning)

ZHOKHOVSKIY, V.V.

Apparatus for determining the degree of straightness of the fiber in  
sliver and roving. Izv.vys.ucheb.zav.;tekh.tekst.prom. no.2:46-50  
160, (MIRA 13:11)

1. Tashkentskiy tekstil'nyy institut.  
(Spinning machinery)

(Textile fibers--Testing)

ZHOKHOVSKIY, M.K.; BAKHVALOVA, V.V.

High-pressure differential resistance manometer. Izm.tekh. no.3:  
12-15 Mr '60. (MIRA 13:6)  
(Manometer)

10.4000A  
28(3)

69183  
S/115/60/000/03/007/031  
D002/D002

R  
AUTHOR: Zhokhovskiy, M.K., Bakhvalova, V.V.  
TITLE: High-Pressure Resistance Differential Pressure Gauge  
PERIODICAL: Izmeritel'naya tekhnika, 1960, Nr 3, pp 12-15 (USSR)

ABSTRACT: The article contains the description of a differential pressure gauge (Figure 1) whose application was treated previously by M.K. Zhokhovskiy [Ref 1], as well as some investigations carried out with this gage. It consists of two transmitters and two resistance coils, both ends of which are lead out through conical electric inlets, the cavities holding the coils being connected to the sources of high-pressures, whose difference is to be measured. The coils are connected to a bridge circuit with a compensating arm (Figure 2). The differential pressure gauge can be used for direct measurements of each separate pressure, as well as for indirect determi-

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... following  
... 1 table, and

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S/115/60/000/03/007/031  
D002/D002

High-Pressure Resistance Differential Pressure Gauge

nation of the difference of the pressures. Its characteristic feature is that it can measure very small differences of high pressures, e.g. used with the usual bridge circuit and a conventional galvanometer it can determine differences of  $0.2 \text{ kg/cm}^2$  at pressures of  $7000 \text{ kg/cm}^2$ . The sensitivity of the device is such that a resistance change of  $0.01 \text{ ohm}$  causes a swing of 160 divisions on the scale, i.e. 4.2 divisions per  $1 \text{ kg/cm}^2$ . There are 2 diagrams, 1 graph, 1 table, and 2 Soviet references. X

Card 2/2



..  
ZHOKHOVSKIY, Mikhail Konstantinovich; LOSKUTOV, V.I., kand.tekhn.nauk,  
resenent; VOLAROVICH, A., prof., doktor fiz.-matemat.nauk,  
red.; ALAVERDOV, Ya.G., red.izd-va; UVAROVA, A.F., tekhn.red.

[Theory and design of instruments with unsealed pistons] Teoriia  
i raschet priborov s neuplotnennym porshnem. Moskva, Gos.nauchno-  
tekhn.izd-vo mashinostroit.lit-ry, 1959. 203 p. (MIRA 12:12)  
(Measuring instruments) (Pistons)

2 HOKH...ovsk. yg. M.K.

24(0); 3(2); 6(2) PHASE I BOOK EXPLORATION SOV/2215  
Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni  
D.I. Mendeleeva  
Referaty nauchno-issledovatel'skikh rabot; sbornik No. 2 (Scientific  
Research Abstracts; Collection of Articles, No. 2) Moscow,  
Standartgiz, 1958. 139 p. 1,000 copies printed.  
Additional Sponsoring Agency: USSR, Komitet standartov, mer i  
izmeritel'nykh priborov.  
Ed.: S. V. Keshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers,  
and engineers engaged in developing standards, measures, and  
gages for the various industries.

COVERAGES: The volume contains 128 reports on standards of measure-  
ment and control. The reports were prepared by scientists of  
institutes of the Komitet standartov, mer i izmeritel'nykh  
priborov pri Sovetskom Ministre SSSR (Commission on Standards,  
Measures, and Measuring Instruments under the USSR Council of  
Ministers), the participating institutes are: VNIIM D.I.  
Mendeleeva, nauchno-issledovatel'skiy metrologicheskii  
Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh  
izmereniy (All-Union Scientific Institute of Metrology imeni  
D.I. Mendeleeva) in Leningrad; Sverdlovsk branch  
of this institute; VNIK - Vsesoyuznyy nauchno-issledovatel'skiy  
institut Komiteta standartov, mer i izmeritel'nykh priborov  
(All-Union Scientific Research Institute of the Commission  
on Standards, Measures, and Measuring Instruments), created  
from MOIMP - Moskovskiy gosudarstvennyy institut mer i  
izmeritel'nykh priborov (Moscow State Institute of Measures  
and Measuring Instruments) October 1, 1955; VNIIPRI -  
Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh  
izmereniy i radiotekhnicheskikh izmereniy (All-Union Scientific  
Research Institute of Physico-technical and Radio-engineering  
Measurements) in Moscow; Kharkovskiy gosudarstvennyy  
institut mer i izmeritel'nykh priborov (Kharkov State Institute  
of Measures and Measuring Instruments); and MOIMP - Novosibirsk  
gosudarstvennyy institut mer i izmeritel'nykh priborov  
(Novosibirsk State Institute of Measures and Measuring Instru-  
ments). No personalities are mentioned. There are no references.

Studying the Effect of Temperature on the Parameters of Cone  
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Savitskiy, P.S., and B.A. Vandyshak. (Sverdlovsk Branch of VNIIM)  
Studying Hardness Distribution Around the Ball Imprint in Hard-  
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Vandyshak, B.A. (Sverdlovsk Branch of VNIIM). Studying Instruments  
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Them 57

Zhukhovskiy, M.K., and V.M. Gramenitskiy (MOIMP). Standard Hy-  
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Boyl', S. Ya. (VNIIM) Assembly and Alignment of Stationary  
Dynamometers for Tension and Compression Tests to 10,000 and  
100,000 kgf 60

Savitskiy, P.S., B.A. Vandyshak, and V.V. Skobelin (Sverdlovsk  
Card 12/1)

28(2)

SOV/115-59-8-6/33

AUTHOR: Zhokhovskiy, M. K.

TITLE: A Pressure Gage With an Effective Piston Area Remaining Unchanged by Pressure.

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 8, pp 14-15 (USSR)

ABSTRACT: The author investigates analytically the conditions under which the effective area of an unsealed pressure gage piston is not influenced by pressure. V. N. Samoylov [Ref 1] analysed possibilities of designing pressure gages with pistons whose surfaces remained unchanged when measuring pressures. He showed that a constant piston surface may be realized only with a differential piston, while a solution of this problem is difficult or impossible with other systems. Based on his previous publications [Ref 2, 3], the author of this paper attempts to achieve a more general approach to this problem by investigating the theory of unsealed pistons. He established that equal pressures acting on the outside of a solid cylinder, or on the outside and the inside of a hollow cylinder produce displacements identical in magnitude and direction. The author concluded that the dis-

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placements of the piston radius and of the inner radius of the cylinder, which are about equal, will be identical, if the cylinder will be loaded symmetrically by equal pressures acting on its inside and outside. He shows a diagram of a piston system complying with the aforementioned conditions. The piston (1) is tightly fitted to a cylindrical insert (2) which is ground into the housing (3) and secured by a nut (4). The cylindrical insert contains radial holes (5) which serve equalizing the pressures in the gap between the piston and the insert and in the gap between the insert and the housing. The author expects that the pressure distributions will be identical on either side of the insert surfaces with a steady-state motion. The solution recommended for this problem is applicable in any system consisting of a plain piston and a conventional cylinder, but it may be also used for any other piston system. Future investigations will show in which way this

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ged by Pressure

system may be realized in practice. There are 1 dia-  
gram and 3 Soviet references.

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SOV/115-59-7-7/33

25(1), 28(2)

AUTHOR: Zholkhovskiy, M.K.

TITLE: The Experimental Error Determination of Piston Manometers at High Pressures

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 7, pp 11-14 (USSR)

ABSTRACT: In three publications (Ref.1,2,3), the author investigated theoretically the errors of all kinds of piston manometers, caused by deformation of the pistons and the cylinders. A solution of this very complicated problem may be given by some approximation and therefore, experimental investigations are required. The correction formulas for different systems of piston manometers up to 2,500 kg/cm<sup>2</sup> were satisfactorily confirmed by experiments of V.N. Samoylov, (Ref.4). In this paper, solutions previously obtained are investigated experimentally for an essentially expanded pressure range. Presently, there are no manometers available whose components are not subjected to pressure deformations. Only indirect test methods may be used, since direct comparison of the manometer under investigation with such gages is not possible. In this pa-

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per, the author applied the method of comparing the readings of two manometers by means of a special differential device. These experimental results may be used for determining the error difference which is caused by the deformation of the piston systems of the manometers to be compared. The aforementioned error of each manometer is known from theoretical calculations and, consequently, there is a possibility of connecting experimental and theoretical data. Fig.1 shows the principal parts of the experimental device. Each piston manometer is connected with its own multiplier and one manganin manometer. The manganin manometers are connected by a valve in such a way that they may communicate if the valve is open. When the valve is closed they work separately. In this case, each manganin manometer will have the same pressure which must be determined by its corresponding piston manometer. The coils of the manganin manometers are connected to a bridge circuit in such a way that the galvanometer records directly their resistance differences. This means that the manganin manometers form a differential circuit. The tests are performed in the following way: Pressure is applied to one of the piston manometers

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and the reading of the bridge circuit is fixed. Then the valve is used for interrupting the communication between the two manganin manometers. Both manometers are brought into equilibrium by means of the multipliers. If the pressures created by each piston manometer are equal, then the bridge will show the previous reading. In case a pressure difference arises because of different piston system deformations, the reading of the bridge will change and the errors of the manometers to be compared are found from the differences of the new and the previous galvanometer readings. An equal-arm bridge is used with  $R_0 \approx 100\Omega$ . Using the aforementioned arrangement, the author investigated various types of high-pressure piston manometers at pressures of 1,000-7,000 kg/cm<sup>2</sup>. In table 2, he presents a comparison between experimental and calculated data. These data show that the deformation error differences of manometers at pressures of 5,000-7,000 kg/cm<sup>2</sup>; generally show an adequate coincidence with calculated data. As a rule, deviations are of accidental character and insignificant in magnitude. There is 1 diagram, 2 tables, 3 graphs and 4 Soviet references.

Card 3/3



ZHOEHOVSKIY, M.K.

Regularities in the melting of substances and their value in  
plotting scales for measuring high pressures, Izv. tekhn. no.2:  
16-21 Mr-Apr '58. (MIRA 11:3)  
(Pressure--Measurement)  
(High pressure research)

ZHOKHOVSKIY, M. K.

Tekhnika izmereniia davleniia i razrezheniia. Moskva, Mashgiz, 1950.  
183 p. illus.

At head of title: Komitet po delam mer i izmeritel'nykh priborov.

(Technique of measuring pressure and rarefaction.)

DLC: QC165.Z5

SO: Manufacturing and Mechanical Engineering in the Soviet Union,  
Library of Congress, 1953

ZHOKHOVSKIY, N.K.; RAZUMIKHIN, V.N.

Mercury melting curves in the ranges up to 20,000 kg. in sec. per  
cm<sup>2</sup> used for plotting scales in measuring high pressures, *Ism. tekhn.*  
no. 4:43-47 JI-Ag '57. (MIRA 10:8)  
(Mercury) (Manometer)

~~ZHOKHOVSKIY, M.K.~~

Problems in plotting scales for superpressures. Izv. tekhn. no.2:  
3-10 Mr-Ap '57. (MLBA 10:6)

(Pressure--Measurement)

PHASE I BOOK EXPLOITATION

SOV/3478

Zhokhovskiy, Mikhail Konstantinovich

Teoriya i raschet priborov s neuplotnennym porshnem (Theory and Design of Instruments with Unsealed Piston) Moscow, Mashgiz, 1959. 203 p. Errata slip inserted. 4,000 copies printed.

Reviewer: V.I. Loskutov, Candidate of Technical Sciences; Ed. M.P. Volarovich, Doctor of Physics and Mathematics; Professor; Ed. of Publishing House: Ya.G. Alaverdov; Tech. Ed.: A.F. Uvarova; Managing Ed. for Literature on Machine Building and Instrument Making (Mashgiz): N.V. Pokrovskiy, Engineer.

PURPOSE: The book is intended for engineers, scientists and students engaged in the study, design, or testing of instruments equipped with pistons.

COVERAGE: The book presents the theory and practical application of instruments employing a free-piston system, e.g., manometers, vacuum gauges, barometers, hydraulic testing apparatus, dynamometers, various types of scale, hardness gauges, etc. The free (unsealed) pistons described here are employed in high-pressure hydraulic actuators and gas compressors wherever a high output force is essential,

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and also in various types of control- and servo-mechanisms designed to control large output power by a low-power force. There are 85 figures, 22 tables, and 61 references, of which 37 are Soviet, and the remainder German and English.

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ZHOKHOVSKIY, O.V.  
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(Knitting machines)

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New high-speed warp knitting machine. Log.prom. 15 no.5:24-27 My '55.  
(Knitting machines) (NLRA 8:7)

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Straightening out cotton fibers in the drawing process. Sbor. nauch.-  
issl. rab. TTI no.4:149-162 '57. (MIRA 11:9)  
(Cotton spinning)

ZHOKHOVSKIY, V. V., Candidate Tech Sci (diss) -- "Investigation of the process of straightening out cotton fiber when stretching, and determination of the optimal parameters of the process in order to provide maximum straightening of the fiber". Tashkent, 1959. 20 pp (Min Higher Educ USSR, Moscow Textile Inst), 150 copies (KL, No 24, 1959, 136)

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Straightening of fibers during drawing and evaluation of yarn  
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nauk

New methods of cotton spinning with the use of a twisted silver.  
Tekst. prom. 21 no.6:15-21 Je '61. (MIRA 15:2)  
(Cotton spinning)



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[Training the trade-union activist group in an enterprise]  
Obuchenie profsoiuznogo aktiva na predpriatii. Moskva,  
Profizdat, 1963. 61 p. (Bibliotekha profsoiuznogo akti-  
vista, no.24(72)) (MIRA 17:3)

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| COUNTRY    | : Bulgaria   | H-8   |
| CATEGORY   | :  |       |
| ABS. JOUR. | : RZKhim., No. 22 1959, No.  | 79126 |
| AUTHOR     | : Ivanov, D. G., Gochev, V. M., and Zholakova, D.S.  |       |
| INST.      | : Not given  |       |
| TITLE      | : The Extraction of Potassium from Alkaline Syenite from a Deposit Near Svidnya Village, Sofia Oblast by the Hydrothermal Process  |       |
| ORIG. PUB. | : Khimiya i Industriya (Bulgaria), 30, No 5, 139-142 (1958)  |       |
| ABSTRACT   | : The possibility of extracting potassium from syenites with high alkalies content has been established. The syenites are mixed with CaO and water and treated for 6 hrs in an autoclave under a pressure of 20 atm. The oxides of potassium and aluminum which pass into solution during the decomposition of the syenites are separated by carbonation with the formation of $\text{CaCO}_3$ containing small amounts of $\text{Al}_2\text{O}_3$ . The soluble carbonates of K and Na are converted to other |       |

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1. ZHOLBATYROV, Ye.

2. USSR (600)

4. Millet

7. Growing high yields of proso millet. Dost. sel'khoz. No. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

AUTHOR: A.A. Zholdak, Engineer SOV/129-59-5-14/17  
TITLE: Bright Isothermal Hardening of Springs made of the Steel  
50KhFA (Svetlaya izotermicheskaya zakalka pruzhin iz  
stali 50KhFA)  
PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov,  
1959, Nr 5, p 57 (USSR)  
ABSTRACT: Bright Isothermal hardening has a number of advantages  
compared to ordinary hardening in oil and water followed  
by tempering. In the case of bright hardening the  
surface of the components remains clean and it is not  
necessary to clean off any scale. Furthermore there is  
less warping, which eliminates the necessity of grinding  
and lapping of components. Bright isothermal hardening  
is extensively used for normal bolts and fine components  
made of the steel 30KhGSA. The author of this paper  
established the following regime of bright hardening for  
springs made of wire from 50KhFA steel: the springs are  
heated in a salt bath (100% Kel) to  $860 \pm 10^{\circ}\text{C}$ , and held  
at that temperature for 2.5 minutes plus  $1/3$  minute for  
each mm of the wire diameter. Following that the wire  
is cooled in a bath consisting of 100% NaOH + 5.8%  $\text{Na}_2\text{CO}_3$

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Bright Isothermal Hardening of Springs made of the Steel 50KhFA at  $330 \pm 5^{\circ}\text{C}$ ; this alkali bath is intensively mixed during the process by steerer or by compressed air. The springs remain in the bath for 20 to 30 minutes. If a yellow hue and an oxide film appear at the surface of the springs the bath is deoxidized with potassium ferrocyanide (0.2 to 0.1% of the weight of the bath). On removing the springs from the alkaline bath they are cooled in water at 60 to 80  $^{\circ}\text{C}$ . Then they are passivated in a 2 to 5% aqueous solution of  $\text{NaNO}_2$  for a duration of 10 to 15 minutes and, following that, the springs are dried at 100 to 150  $^{\circ}\text{C}$ . After treating the springs in accordance with this regime the springs have a bright surface (see photo). After repeated static tests for a duration of 200 hours no residual deformation or cracks were detected. This is a complete translation.

Card 2/2

There is 1 photo.

ZHOLDAK, S. A.

Zholdak, S. A. "Drying by infra-red rays," Sudostroyeniye, 1948, No. 6,  
p. 24-26

SO: U-3264, 10 April 53, (Istoria 'Zhurnal 'nykh Statey, No. 4, 1949).

28(1); 25(1)

PHASE I BOOK EXPLOITATION

80V/2010

Zholdak, Sergey Afanas'yevich, Yakov Yakovlevich Lychagin, and Vitaliy  
Semenovich Popov

Tekhnologiya izgotovleniya elektroelementov dlya elektreavtomaticheskikh ustroystv  
(Manufacturing Processes for Electric Elements of Automatic Electric Systems)  
Moscow, Oborongiz, 1959, 423 p. Errata slip inserted, 6,000 copies printed.

Reviewers: N.N. Ushakov, Candidate of Technical Sciences, Docent, and M.M.  
Zil'bersheyd, Engineer; Ed.: S.A. Abaza, Engineer; Managing Ed.: A.I. Sokolov;  
Ed. of Publishing House: G.F. Loseva; Tech. Ed.: V.P. Rozhin.

PURPOSE: This book may be useful to engineers and technicians by helping them  
solve practical problems they meet in their plants, and also for vuz students  
concerned with the production of electrical elements of automatic electric  
apparatus.

COVERAGE: The authors discuss the design problems and manufacturing of electric  
small-size machines used in automatic electric systems. They describe selsyn  
generators and motors, mag-slips, servomotors and rotary transformers, and  
modern methods for manufacturing the parts of these machines. They also discuss

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Manufacturing Processes (Cont.)

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the outlook for improving manufacturing methods. Chapters 1, 9, and 14 are written by S.A. Zholdak, chapters 2, 3, 4, 5, 6, 12 by Ya. Ya. Iychagin and 7, 8, 9, 11, 13, 15 by V.S. Popov. The authors thank N.N. Ushakov, M.M. Zil'bersheyd, and S.A. Abaz. There are 45 references; 42 Soviet, 2 German and 1 English (translated into Russian).

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8-12-59

ZHOLDAX, Sergey Afanas'yevich; BULOVSKIY, P.I., retsenzent; PAVLOV, V.A.,  
nauchnyy red.; SHAURAK, Ye.N., red.; TSAL, R.K., tekhn. red.

[Technology of the manufacture of small gyroscopic motors] Tekhnolo-  
giya izgotovleniya malogabornitnykh giromotorov. Leningrad, Gos.  
soiuznoe izd-vo sudostroitel'-promyshl., 1961. 266 p. (MIRA 14:7)  
(Gyroscopic instruments) (Electric motors)

PHASE I BOOK EXPLOITATION

SOV/5801

Zholdak, Sergey Afanas'yevich

Tekhnologiya izgotovleniya malogabaritnykh giromotorov (The Manufacture of Miniature Gyromotors) Leningrad, Sudpromgiz, 1961. 266 p. 4200 copies printed.

Reviewer: P. I. Bulovskiy; Scientific Ed.: V. A. Pavlov; Ed.: Ye. N. Shaurak; Tech. Ed.: R. K. Tsai.

PURPOSE: This book is intended for technical personnel in the instrument industry; it may also be useful to students specializing in instrument building in schools of higher education and secondary technical schools.

COVERAGE: Problems encountered in manufacturing parts and subassemblies for miniature gyromotors are discussed. Attention is also given to the assembling and testing of gyromotors. Tools and equipment which provide for a high degree of manufacturing accuracy are described. The presentation of material in the book follows the sequence of operations used in the machining of parts and assembly of gyromotor subunits. Advanced manu-

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The Manufacture of Miniature Gyromotors

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facturing processes are discussed and recommendations for their application to production are given. No personalities are mentioned. There are 37 references: 33 Soviet and 4 English.

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Card 2/7

ZHOLDAK, Sergey Afanas'yevich; RUBO, L.G., retsenzent[deceased];  
TSIBULEVSKIY, P.I., red.

[Repair of miniature electric machines of automatic  
systems] Remont elektricheskikh mikromashin avtomati-  
cheskikh ustroistv. Moskva, Energiia, 1965. 255 p.  
(MIRA 18:2)

GRIGOR'YEVA, V.V.; ZHOLDAKOV, A.A.

Determination of the composition of complexes by the data of  
the metal indicator method. Ukr. khim. zhur. 30 no.1:95-102 '64.  
(MIRA 17:6)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.

ZHOLDAKOV, I. V.

"The Determination of Speech Intelligibility in a Channel with a Limited Frequency Band," Iz. Elektroprom. Slab Toka, No.12, pp 32-41, 1940

ZHOLI, V.(Artem, Primorskiy kray)

Alteration of the negative frame of the enlarger "Leningrad."  
Sov.foto 18 no.11:60 N '58. (MIRA 11:12)  
(Photography--Enlarging)

ZHOLIK, A.P.

Effect of the duration of "rest" of piling on its bearing  
capacity. Osn. fund. i mekh. gran. 6 no.4:10-11 '64.

(MIRA 17:12)

ZHOLKEVICH, A. ; IVANOV, Ye.

Indices of the utilization of capital assets in industry. Top.  
ekon. no.10:25-33 0 '60. (MIRA 13:9)  
(Russia--Industries) (Index numbers (Economics))

ZHOLKEVICH, A.

Problems of planning improvement. Vop, ekon. no. 5:143-152 My '61.

(MIRA 14:5)

(Russia—Economic policy—Congressses)



ZHOLKEVICH, A.

"Production organization and labor productivity in the U.S.S.R.  
industry" by S.A. Kheirman. Reviewed by A. Zholkevich. Vop.  
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(Industrial organization) (Labor productivity)  
(Kheirman, S.A.)

ZHOLIK, A.P.

ANDON'YEV, V.L.; BAUM, V.A.; BAUMGARTEN, N.K.; BEREZIN, V.D.; BIRYUKOV, I.K.;  
BIRYUKOV, S.M.; BLOKHIN, S.I.; BOROVY, G.A.; BULIN, M.Z.; BURAKOV,  
N.A.; VERTSAYZER, B.A.; VOVK, G.M.; VORMAN, B.A.; VOSHCHININ, A.P.;  
GALAKTIONOV, V.D., kand. tekhn. nauk; GEMKIN, Ye.M.; GIL'DENBIAT,  
Ya.D., kand. tekhn. nauk; GINZBURG, M.M.; GLEBOV, P.S.; GODES, E.G.;  
GORBACHEV, V.N.; GRZHIB, B.V.; GREKULOV, L.F., kand. s.-kh. nauk;  
GRODZINSKAYA, I.Ya.; DANILOV, A.G.; DMITRIYEV, I.G.; DMITRIYENKO,  
Yu.D.; DOBROKHOTOV, D.D.; DUBININ, L.G.; DUNDUKOV, M.D.; ZHOLIK,  
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K.I.; MENDELEVICH, I.R.; MIKHAYLOV, A.V., kand. tekhn. nauk;  
MUSIYVA, R.N.; NATANSON, A.V.; NIKITIN, M.V.; OVES, I.S.;  
OGUL'NIK, G.R.; OSIPOV, A.D.; OSMER, N.A.; PETROV, V.I.; PERYSHKIN,  
G.A., prof.; P'YANKOVA, Ye.V.; RAPOPORT, Ya.D.; REMEZOV, N.P.;  
ROZANOV, M.P., kand. biol. nauk; ROCHEGOV, A.G.; RUBINCHIK, A.M.;  
RYBCHESKIY, V.S.; SADCHIKOV, A.V.; SEMENTSOV, V.A.; SIDENKO, P.M.;  
SINYAVSKAYA, V.T.; SITAROVA, M.N.; SOSNOVIKOV, K.S.; STAVITSKIY,  
Ye.A.; STOLYAROV, B.P. [deceased]; SUDZILOVSKIY, A.O.; SYRTSOVA,  
Ye.D., kand. tekhn. nauk; FILIPPSKIY, V.P.; KHALTURIN, A.D.;  
TSISHEVSKIY, P.M.; CHERKASOV, M.I.; CHERNYSHEV, A.A.; CHUSOVITIN,  
N.A.; SHESTOPAL, A.O.; SHEHTER, P.A.; SHISHKO, G.A.; SHCHERBINA,  
I.N.; ENGEL', F.F.; YAKOBSON, A.G.; YAKUBOV, P.A., ARKHANGEL'SKIY,  
(Continued on next card)

ANDON'YEV, V.L.... (continued) Card 2.

Ye.A., retsenzent, red.; AKHUTIN, A.N., retsenzent, red.; BALASHOV, Yu.S., retsenzent, red.; BARABANOV, V.A., retsenzent, red.; BATUNER, P.D., retsenzent, red.; BORODIN, P.V., kand. tekhn. nauk, retsenzent, red.; VALUTSKIY, I.I., kand. tekhn. nauk, retsenzent, red.; GRIGOR'YEV, V.M., kand. tekhn. nauk, retsenzent, red.; GUBIN, M.F., retsenzent, red.; GUDAYEV, I.N., retsenzent, red.; YERMOLOV, A.I., kand. tekhn. nauk, retsenzent, red.; KARAULOV, B.F., retsenzent, red.; KRITSKIY, S.N., doktor tekhn. nauk, retsenzent, red.; LIKIN, V.V., retsenzent, red.; LUKIN, V.V., retsenzent, red.; IUSKIN, Z.D., retsenzent, red.; MATRIROSOV, A.Kh., retsenzent, red.; MENDELEYEV, D.M., retsenzent, red.; MENKEL', M.F., doktor tekhn. nauk, retsenzent, red.; OBREZKOV, S.S., retsenzent, red.; PETRASHEN', P.N., retsenzent, red.; POLYAKOV, L.N., retsenzent, red.; HUMYANTS'EV, A.M., retsenzent, red.; RYABCHIKOV, Ye.I., retsenzent, red.; STASHENKOV, N.G., retsenzent, red.; TAKANAYEV, P.F., retsenzent, red.; TARANOVSKIY, S.V., prof., doktor tekhn. nauk, retsenzent, red.; TIZDEL', R.R., retsenzent, red.; FEDOROV, Ye.M., retsenzent, red.; SHEVYAKOV, M.N., retsenzent, red.; SHMAKOV, M.I., retsenzent, red.; ZHUK, S.Ya. [deceased], akademik, glavnyy red.; RUSSO, G.A., kand. tekhn. nauk, red.; FILIMONOV, N.A., red.; VOLKOV, L.N., red.; GRISHIN, M.M., red.; ZHURIN, V.D., prof., doktor tekhn. nauk, red.; KOSTROV, I.N., red.; LIKHACHEV, V.P., red.; MEDVEDEV, V.M., kand. tekhn. nauk, red.; MIKHAYLOV, A.V., kand. tekhn. nauk, red.; PETROV, G.D., red.; RAZIN, N.V., red.; SOBOLEV, V.P., red.; FERINGER, B.P., red.; FREYGOFER, (Continued on next card)

ANDON'YEV, V.L.... (continued) Card 3.

Ye.F., red.; TSYPLAKOV, V.D. [deceased], red.; KORABLINOV, P.N.,  
tekhn. red.; GENKIN, Ye.M., tekhn. red.; KACHEROVSKIY, N.V., tekhn.  
red.

[Volga-Don; technical account of the construction of the V.I. Lenin  
Volga-Don Navigation Canal, the TSimlyansk Hydroelectric Center,  
and irrigation systems] Volgo-Don; tekhnicheskii otchet o stroitel'-  
stve Volgo-Donskogo sudokhodnogo kanala imeni V.I. Lenina, TSim-  
lianskogo gidrouzla i orositel'nykh sooruzhenii, 1949-1952; v piati  
tomakh. Moskva, Gos. energ. izd-vo. Vol.1. [General structural  
descriptions] Obshchee opisanie sooruzhenii. Glav. red. S.IA. Zhuk.  
Red. toma M.M. Grishin. 1957. 319 p. Vol.2. [Organization of con-  
struction. Specialized operations in hydraulic engineering] Orga-  
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(Continued on next card)

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(MIRA 11:9)

1. Russia (1923- . U.S.S.R.) Ministerstvo elektrostantsii. Byuro  
tekhnicheskogo otcheta o stroitel'stve Volgo-Dona. 2. Chlen-kor-  
respondent Akademii nauk SSSR (for Alkhutin). 3. Deystvitel'nyy  
chlen Akademii stroitel'stva i arkhitektury SSSR (for Grishin,  
Razin).

(Volga Don Canal--Hydraulic engineering)

ZHOLKEVICH, A. Ya.

O Novoi Khromogennoi bakterii -- *Bacterium cristallino-violaceum* -- New Chromogenic Bacteria)

Mikrobiol. Zhurnal, 1, 1925 p 213

Tr. 460(2) 5 June 1953

ANNALS, ANNA Ya.  
"Contribution to the Problem of Variation of Lepra Cultures Subjected to X-Raying,"  
Dok.AN, 39, No.2, 1943. Central Inst. Roentgenology c1943-. Central Inst. Malaria  
and Med. Parasitology.

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| <p>USSR, medicine - Leprosy<br/>Medicine - Animals, Experimentation<br/>"Leprosy Inoculations on Experimental Animals," A.<br/>M. Zolkevlch, 6 pp<br/>"Arkhiv Patologii" No 4</p>   | <p>Jul/Aug 1947</p> |
| <p>This article is Report No IV and discusses the effect<br/>of inoculating white rats with human leprosy. Several<br/>microphotographs of the effect of leprosy on various or-<br/>gans of the white mice. Observations were carried<br/>out over a period of six months. Among the conclu-<br/>sions was the fact that the histological progress of<br/>leprosy was different in white mice from the progress<br/>in humans. The experiments lead to a new method for<br/>obtaining experimental models of human leprosy on<br/>28759</p> | <p>Jul/Aug 1947</p> |
| <p>USSR/Medicine - Leprosy (Contd)</p>  | <p>28759</p>        |
| <p>animals. The experiments were conducted at the<br/>Institute of Malaria and Medical Parasitology, Acad-<br/>emy of Medical Sciences of the USSR (Director: Prof<br/>P. G. Sergiyev).</p>   | <p>28759</p>        |



USSR/Medicine, Biology - Microbiology

Jan/Feb 52

"Problems of the Formation of Reactive Forms of Bacteria in the Light of O. B. Lepeshinskaya's Teaching," A. Ya. Zholkevich, Moscow

"Uspekhi Sovrem Biol" Vol XXIII, No 1, pp 101-116

The established views of monomorphists, who deny a pheomorphic cycle of development in representatives of the order Eubacteriales, must be revised. Bacteria of this order may change into a reproductive stage characterized by hypertrophic modification of cells and formation of "polyenergidic" forms according to M. A. Peshkov or of gonidangia (I) containing

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(Contd 1)

Generative elements (II: Gonidia) which are similar to elementary virus corpuscles and from which embryonal bacteria may form. I are possibly an intermediate stage between bacteria and viruses; their formation constitutes adaptation to the environment; they may form in the human or animal body. In vitro, moderate doses of neutral salts (e.g.,  $KNO_3$ ) or x-rays induce formation from bacteria of ripe I, stronger doses result in gigantic I which undergo lysis, excessive doses in inhibition and miniature cells. I and II are of importance in the pathogenesis of tuberculosis and lepra and the

207766

etiology of acute infectious diseases accompanied by yellow-fever bacteria (III) (e.g., scarlet fever, influenza, typhus). Propagation and modification of III in this manner may lead to development of pathogenic characteristics in them.

207766

POLIKARPOV, Mikhail Sergeyevich; GERSHANOVSKIY, Ovsey Moiseyevich;  
ZHOLKEVICH, Anton Yevgen'yevich; STREL'NIKOVA, M.A., red.;  
PONOMAREVA, A.A., tekhn. red.

[Planning of industrial production in terms of costs] Planirovanie proizvodstva produktov promyshlennosti v stoimostnom vyrazhenii. Moskva, Izd-vo ekon. lit-ry, 1961. 110 p.

(MIRA 15:2)

(Industrial management)

ZHOLKEVICH, A.Ye.

Indices of the volume of output and labor productivity in  
ferrous metallurgy. Stal' 20 no. 12:1137-1140 D '60.

(MIRA 13:12)

(Metallurgical plants--Accounting)

69708

SOV/81-59-9-30328

5.4100

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 9, p 39 (USSR)

AUTHOR: Zholkevich, G.A.

TITLE: The Absorption and Photoconductivity of Zinc Selenide and Telluride

PERIODICAL: Uch. zap. Vologodsk. gos. ped. in-ta, 1958, Vol 23, pp 103 - 128

ABSTRACT: The absorption spectra and the photoconductivity (Ph) of ZnSe and ZnTe films have been investigated which were prepared by sublimation or by the reaction between Zn and Se or Te in a sealed ampoule. At 292°K the longwave edge of the ZnSe absorption spectrum is at 465 mμ, and that of ZnTe at 545 mμ; at the reduction of the temperature it shifts somewhat toward the shortwave side. The spectra of Ph for ZnSe (obtained by the reaction between Zn and Se) are clearly limited at the shortwave side, have a maximum at 460 mμ and a more gradual slope of the longwave branch; for dust-coated films of ZnSe prepared by sublimation the position of the maximum in the Ph spectrum depends

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69708

SOV/81-59-9-30328

The Absorption and Photoconductivity of Zinc Selenide and Telluride

on the quantity of excessive Se. The Ph spectra of ZnTe have no sharp maximum limited at the shortwave side. The effect of Cd, Hg, Cl, Ga, Cu, Ag, Mn admixtures on Ph has been investigated; the activation of Cd and Hg increases Ph of ZnSe dust and shows no effect on Ph of ZnSe obtained by the chemical method.

B. Gugel'

Card 2/2

S/112/60/000/006/020/032

Translation from: Referativnyy zhurnal, Elektrotehnika, 1960, No. 6,  
pp. 358-359, # 5.2740

AUTHOR: Zholkevich, G. A.

TITLE: Photoelectric Properties of Zinc Selenide Films Produced by Vacuum Evaporation

PERIODICAL: Uch zap. Vologodsk. gos. ped. in-ta, 1958, No. 23, pp. 129-149

TEXT: The principal photoelectric properties of photosensitive layers in photoconductive tubes are discussed, using ZnSe as an example. Methods of obtaining specimens of photosensitive layers on signal plates of photoconductive tubes are considered. The author gives the volt-ampere characteristics of two specimens, prepared by the method of vacuum evaporation with an excess of Se, and by applying ZnSe to a pure Se layer. The effect of a strong field causing a divergence from Ohm's law for a photosensitive layer at voltages of 2-4 v is investigated as well as the character of dependence of conductivity on voltage. The spectral distribution of photoelectric current is shown in case the layer is illuminated from the side of the platinum electrode. To clarify the nature

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S/112/60/000/006/020/032

Photoelectric Properties of Zinc Selenide Films Produced by Vacuum Evaporation

of the space charge, originating during polarization, time characteristics of charging and discharging the specimens have been recorded. Under steady-state conditions, at an illumination of several hundred lux, the photoelectromotive force amounts to some tenths of a volt.

V. P. Shch.

Card 2/2

ZHOLKEVICH, G. A., Cand Phys-Math Sci (diss) -- "Optical and photoelectric properties of zinc selenide and telluride". Leningrad, 1960. 17 pp (State Order of Lenin Optical Inst im S. I. Vavilov), 150 copies (KL, No 11, 1960, 128)